

Amendments to the Claims:

Claim 1 (previously canceled)

Claim 2 (previously canceled)

Claim 3 (previously canceled)

Claim 4 (previously canceled)

Claim 5 (previously canceled)

Claim 6 (canceled)

Claim 7 (currently amended): The global positioning system receiver of claim ~~6~~ 12, further comprising:

- (a) a real time clock connected to said programmable digital signal processor for improving time for first fix;
- (b) a serial electrically erasable programmable read only memory connected to the programmable digital signal processor; and
- (c) a software driver connected to the programmable digital signal processor;

Claim 8 (canceled).

Claim 9 (canceled).

Claim 10 (currently amended): The global positioning system receiver of claim ~~6~~ 12, wherein said radio frequency down converter is connected to and in communication with a low cost frequency crystal of low stability, whereby the flexible programmability of the digital signal processor maintains high performance notwithstanding the use of said low cost frequency crystal of low stability.

Claim 11 (currently amended): The global positioning system receiver ~~as in~~ of claim ~~1~~ 12 further comprising a programmatic interface for providing the capability to integrate new applications on the digital signal processor, whereby the need for additional microcontrollers is obviated.

Claim 12 (new) A global positioning system receiver for performing both navigation and correlation functions, comprising:

- (a) a radio frequency down converter;
- (b) a programmable digital signal processor;
- (c) a signal processing unit in communication with and residing within said programmable digital signal processor for performing signal correlation, wherein said signal processing unit further comprises:
 - (1) a correlator for generating correlation values by simultaneously performing signal acquisition and tracking;

- (2) a correlator manager connected to said correlator for generating pseudorange and doppler measurements and extracting navigation messages;
 - (3) a channel manager connected to the correlator for assigning channels in the correlator;
 - (4) a measurement data processor connected to said correlator manager for validating the measurement data through the filtering of pseudorange and doppler measurements;
- (d) a navigation processing unit in communication with and residing within said programmable digital signal processor for performing navigation functions, wherein said navigation processing unit further comprises;
 - (1) a user position computation module for obtaining the position, velocity and time by receiving the measurements from said measurement data processor;
 - (2) a satellite position compute module connected to user position estimation module for computing the position and velocity of the satellites; and
 - (3) visibility computation and satellite selection module connected to said channel manager for generating the list of visible satellites required by said channel manager, based on the position estimates;

whereby the integration of the navigation and correlation functions in the programmable digital signal processor obviates the need for a separate hardware correlator, the power consumption is reduced as a result of a fewer number of hardware components, and the ability to change the sampling frequency by programming the digital signal processor chip enables the programmable digital signal processor to interface with any type of the radio frequency down converter.

Claim 13 (new) The global positioning receiver of claim 12, wherein said signal processing unit further comprises:

- (a) a measurement data processor connected to said correlator manager for validating the measurement data through the filtering of pseudorange and doppler measurements; and
- (b) a satellite database manager connected to and in communication with the correlator manager for maintaining the database of navigation messages processed by the correlator manager in the global positioning receiver.

Claim 14 (new) The global positioning receiver of claim 12, wherein said navigational processing unit further comprises:

- (a) a host communication module for communicating with the host through a software driver link; and
- (b) a non-volatile memory module connected to said satellite visibility compute module for managing the data in said real time clock of and said electrically erasable programmable read only memory.